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Notice of Allowability	Application No.	Applicant(s)	
	10/628,431	WEGMANN ET AL.	
	Examiner	Art Unit	
	Michael A. Lyons	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 25 January 2007.
2. ☒ The allowed claim(s) is/are 1-6, 8, 11-14 and 28-37.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| <ol style="list-style-type: none">1. <input type="checkbox"/> Notice of References Cited (PTO-892)2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none">5. <input type="checkbox"/> Notice of Informal Patent Application6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance9. <input type="checkbox"/> Other _____ |
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DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Laura Moskowitz on April 24, 2007.

The application has been amended as follows:

Claims 7 and 15-26, previously withdrawn in response to the restriction requirement of December 6, 2005, are hereby cancelled.

Allowable Subject Matter

Claims 1-6, 8, 11-14, and 28-37 are allowed in view of the prior art.

The following is an examiner's statement of reasons for allowance:

As to claims 1, and 3, the prior art of record, taken either alone or in combination, fails to disclose or render obvious a method for determining the influencing of the state of polarization of optical radiation by an optical system, the method comprising, among other essential steps, determining the influencing of the state of polarization by the optical system by means of evaluating the measured exit state of polarization with reference to the entrance state, where the influencing of the state of polarization caused by the optical system of prescribable aperture is determined with pupil resolution and wherein an associated ellipsometric measurement is carried out, with the optical system being a microlithography objective (claim 1), or where a spatially incoherent point light radiation emanating from the object plane of the optical system is the entrance-side radiation (claim 3), in combination with the rest of the limitations of the above claims.

As to claim 5, the prior art of record, taken either alone or in combination, fails to disclose or render obvious a method for determining the influencing of the state of polarization of optical radiation by an optical system, the method comprising, among other essential steps, determining the influencing of the state of polarization by the optical system by means of evaluating the measured exit state of polarization with reference to the entrance state, where the influencing of the state of polarization caused by the optical system of prescribable aperture is determined with pupil resolution, where either a shearing interferometer unit or a point-diffraction interferometry unit is included, these units being used to measure and evaluate the exit state of polarization within the device as a whole, in combination with the rest of the limitations of the above claim.

As to claims 8 and 33, the prior art of record, taken either alone or in combination, fails to disclose or render obvious an apparatus for determining the influencing of the state of polarization of optical radiation by an optical system, the apparatus comprising, among other essential elements, polarization detector means for measuring the exit state of polarization of radiation emerging from the optical system, and an evaluation unit for determining the influencing of the state of polarization by the optical system by means of evaluating the measured exit state of polarization with reference to the entrance state of polarization, the polarization detector means and evaluation unit determining the influencing of the state of polarization with pupil resolution, in combination with the rest of the limitations of the above claims.

As to claims 13 and 36, the prior art of record, taken either alone or in combination, fails to disclose or render obvious an apparatus for determining the influencing of the state of polarization of optical radiation by an optical system, the apparatus comprising, among other essential elements, polarization detector means for measuring the exit state of polarization of radiation emerging from the optical system, and an evaluation unit for determining the influencing of the state of polarization by the optical system by means of evaluating the measured exit state of polarization with reference to the

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entrance state of polarization, wherein the polarization detector means includes a shearing interferometer unit or a point-diffraction interferometry unit, in combination with the rest of the limitations of the above claim.

As to claims 28 and 31, the prior art of record, taken either alone or in combination, fails to disclose or render obvious a method for determining the influencing of the state of polarization of optical radiation by an optical system, the method comprising, among other essential steps, determining the influencing of the state of polarization by the optical system by means of evaluating the measured exit state of polarization with reference to the entrance state, where the influencing of the state of polarization caused by the optical system of prescribable aperture is determined with pupil resolution, where a spatially incoherent point light radiation emanating from the object plane of the optical system is the entrance-side radiation, and where, in claim 31, either a shearing interferometer unit or a point-diffraction interferometry unit is included, these units being used to measure and evaluate the exit state of polarization within the device as a whole, in combination with the rest of the limitations of the above claim.

With further regard to the above, please see the applicants' arguments dated January 25, 2007 in response to the previous Office action of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Lyons whose telephone number is 571-272-2420. The examiner can normally be reached on Monday through Friday.

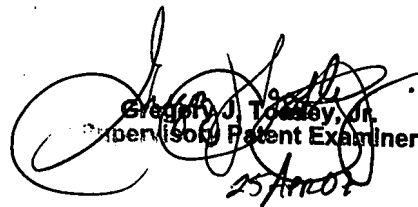
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley can be reached on 571-272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAL

April 24, 2007


Gregory J. Toatley, Jr.
Supervisor, Patent Examiner
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